

**IN THE CLAIMS:**

1. **(Original)** Method of digitally equalizing sound from loudspeakers placed in a room having a combined loudspeaker/room transfer function, said method comprising placing a microphone in the room, emitting one or more pulses from a loudspeaker through an amplifier and measuring the impulse response in a desired listening position, said method is characterized in the following steps:
  - a) the measured impulse responses are pre-processed by an algorithm and weighted
  - b) the output from the pre-processing algorithm is split by an algorithm and adapted to at least two frequency bands using cross-over filters and down sampling
  - c) the output from the band splitting algorithm is fed to at least two frequency band correction filter design algorithms
  - d) the output from the band correction filter design algorithms are fed to a delay and amplitude aligning algorithm
  - e) the output from the aligning algorithm is fed to a post processing algorithm
  - f) storing and using the output from the post processing algorithm to equalize in real time a sound source that is fed to the amplifier.
2. **(Original)** Method according to claim 1, characterized in that the output from the pre-processing algorithm is divided into typically three frequency bands, said three bands are low-, mid- and high frequency bands respectively.

3. **(Currently amended)** Method according to claim 1 ~~or 2~~, characterized in that, wherein the output from the pre-processing algorithm is used as an input in a pre-correction algorithm, said pre-correction algorithm having at least one more input adapted to receive an output from one or more optional circuits representing certain acoustic impacts on a sound received in the listening position and said pre-correcting algorithm having an output that is fed to the frequency band correction filter design algorithm.

4. **(Original)** Method according to claim 3, characterized in that one of the optional circuits represents parameters measured from a loudspeaker under ideal conditions in an anechoic room.

5. **(Currently amended)** Method according to claim 3 ~~or 4~~, characterized in that, wherein one of the optional circuits represents parameters derived from psycho acoustic conditions.

6. **(Currently amended)** Method according to claim 2 ~~5~~, characterized in that in 3, wherein the first 30 ms the reflections in the measured impulse response are attenuated more strongly than in the rest of the impulse response.

7. **(Currently amended)** Method according to claims 1 ~~6~~, characterized in that claim 1, wherein the aligning algorithm comprises aligning functionality for synchronizing the output from the band filters.

8. **(Currently amended)** Method according to claim 1 ~~7~~, characterized in that 1, wherein the aligning algorithm further comprises scaling and summation functionality.

9. **(Currently amended)** Method according to ~~claims 1-8,~~  
~~characterized in that~~claim 1, wherein the correction is performed in  
respect of certain part of a room in which the listener is placed.

10. **(Currently amended)** Use of a method according to ~~claims~~  
~~1-9~~claim 1 in a multi channel set-up of speakers.